What is claimed is:

1. A tubing network, attachable to an automatic injector device, comprising:

a fluid bag connector;

a first line connected at one end to the fluid bag connector;

a patient manifold connected to the other end of the first line and connectable to the automatic injector device for fluid communication therewith;

a second line connected at one end to the patient manifold such that the patient manifold is usable to selectively port fluid from either the automatic injector device or the first line, to the second line;

a stopcock capable of performing as a three-way stopcock, connected to a second end of the second line, useable to connect the second line to a catheter;

a waste line attached at a first end to the three-way stopcock such that the waste line is in selectable fluid communication with the second line;

a pump operably connected to a second end of the waste line for taking suction thereon;

a bag line connected at a first end to the pump such that the bag line receives pumped fluid when the pump is operating; and,

a waste bag operably connected to a second end of the bag line.

2. The tubing network of claim 1 wherein said pump comprises a manual pump.

3. The tubing network of claim 1 wherein said pump comprises a syringe.

4. The tubing network of claim 3 further comprising a three-way check valve having three ports, the first port operably connected to the inlet line, the second port operably connected to the syringe, and the third port operably connected to the bag line, the valve constructed and arranged such that when a plunger of the syringe is withdrawn to create

suction within the syringe, the fluid is allowed to enter the first port and exit the second port and fluid is prevented from entering the valve through the third port, and such that when the plunger of the syringe is advanced, thereby forcing fluid from the syringe, fluid is allowed to enter the valve through the second port and exit the valve through the third port, while fluid is restricted from exiting the valve through the first port.

5. The tubing network of claim 1 wherein said pump comprises a peristaltic pump and said waste line is integral with said bag line.

6. The tubing network of claim 1 wherein said patient manifold comprises a three-way stopcock.

7. The tubing network of claim 1 wherein said patient manifold comprises a three-way check valve.

8. The tubing network of claim 1 wherein said patient manifold comprises an automatic valve constructed and arranged such that fluid communication normally exists between said first line and said second line and such that when a predetermined amount of positive fluid pressure is generated by the automatic injector device, the fluid pressure causes a passageway between the first line and the second line to become blocked and opens a passageway between the automatic injector device and the second line.

9. The tubing network of claim 1 wherein said patient manifold comprises a check valve operably connected to the first line, thereby allowing flow from the bag connector to the second line and blocking flow from the second line to the bag connector.

10. The tubing network of claim 9 wherein said patient manifold further comprises a check valve operably connected to the automatic injector device, thereby allowing flow from the automatic injector device to the second line and blocking flow from the second line to the automatic injector device.

11. The tubing network of claim 9 wherein said patient manifold further comprises a check valve operably connected to the second line, thereby allowing flow from the one end of the second line to the stopcock and blocking flow from the stopcock to the one end of the second line.

12. The tubing network of claim 1 wherein said patient manifold comprises a motor operated valve, controllable by a computer of said automatic injector device.

13. The tubing network of claim 1 further comprising a packaging bag, useable to contain and maintain sterility of said fluid bag connector, said first and second lines, said patient manifold, said stopcock, said waste line, said pump, and said bag line, during shipping of said tubing network.

14. The tubing network of claim 13 wherein said packaging bag is further useable to contain and maintain sterility of said waste bag.

15. The tubing network of claim 13 wherein said packaging bag is useable as said waste bag after said packaging bag is opened and emptied.

16. The tubing network of claim 15 wherein said packaging bag comprises a connector useable to establish fluid communication between said bag line second end and said packaging bag.

17. The tubing network of claim 1 further comprising a check valve operably connected to said waste line allowing flow from said stopcock to said pump and preventing flow from said pump to said stopcock.

18. The tubing network of claim 1 further comprising a check valve operably connected to said bag line allowing fluid flow from said pump to said waste bag and preventing fluid flow from said waste bag to said pump.

19. A method of purging air bubbles from a medical tubing network comprising:

operably attaching the fluid network to a fluid pump;

causing the fluid pump to send a plurality of pressure waves through the fluid network, thereby causing bubbles adhered to the fluid network to become dislodged;

directing fluid used as a medium to carry said pressure waves to a waste container.

20. The method of claim 19 whereby causing the fluid pump to send a plurality of pressure waves comprises commanding the pump to start and stop intermittently.

21. The method of claim 19 whereby operably attaching the fluid network to a fluid pump comprises threading a tube of the tubing network through a peristaltic pump.

22. The method of claim 19 whereby operably attaching the fluid network to a fluid pump comprises operably connecting the fluid network to a motor-operated syringe.

23. The method of claim 22 whereby causing the fluid pump to send a plurality of pressure waves through the fluid network comprises causing a plunger of the syringe to move through the syringe in a stuttering hammer motion.

24. A method of inflating a balloon catheter comprising:

a) injecting fluid into the balloon catheter at a predetermined rate;

b) receiving actual pressure data;

c) comparing the actual pressure data to baseline pressure data representative of inflation characteristics of the balloon catheter in a controlled environment;

d) adjusting the inflation rate in response to the difference between the actual pressure and the baseline pressure.

25. The method of claim 24 further comprising:

monitoring for a pressure drop of a predetermined magnitude;

holding pressure constant in said balloon for a predetermined time after said pressure drop.

26. The method of claim 24 further comprising:

monitoring for a pressure drop of a predetermined magnitude;

deflating said balloon after said pressure drop;

withdrawing the balloon catheter.

27. The method of claim 24 further comprising:

operably attaching a computerized inflation device to the balloon catheter;

programming the computer to perform the steps a), b), c), and d).

28. The method of claim 24 further comprising:

e) recording the actual pressure data as a function of time.

29. The method of claim 28 further comprising:

f) recording the baseline pressure data as a function of time.

30. The method of claim 28 further comprising:

f) recording the injection rate as a function of time.

31. The method of claim 27 wherein said predetermined rate of step a) comprises an algorithm providing varying injection rates as a function of time.

32. The method of claim 24 further comprising:

e) defining data safety limits;

f) activating an alarm when the actual pressure data falls outside said safety limits.

33. An automatic medical balloon inflation device comprising:

a fluid pump, attachable to a balloon catheter, and capable of providing fluid pressure to a balloon at a distal end of the balloon catheter;

a computer, operably attached to the pump, and capable of controlling the fluid pressure created by the pump;

a pressure detector, operably attached to the computer, and capable of providing data to the computer corresponding to the fluid pressure created by the pump.

34. The automatic medical balloon inflation device of claim 33 further comprising a program segment, stored in a computer readable medium readable by said computer, that when executed enables said computer to determine the existence of predetermined characteristics of the data received by the computer from the pressure detector, and to react to the characteristics in a predetermined manner.

35. The automatic medical balloon inflation device of claim 33 further comprising a monitor operably connected to the computer and capable of displaying data representative of the data received from the pressure sensor.

36. The automatic medical balloon inflation device of claim 35 further comprising a program segment, stored in a computer readable medium readable by said computer, that when executed enables said computer to send signals to the monitor to display a graph of fluid pressure versus time.

37. The automatic medical balloon inflation device of claim 30 further comprising a program segment, stored in a computer readable medium readable by said computer, that when executed enables said computer to send signals to the monitor to display a graph of balloon volume versus time.

38. The automatic medical balloon inflation device of claim 34 further comprising a second program segment, readable by said computer, enabling said computer to receive data representative of baseline inflation characteristics of a balloon catheter under a no-

load condition, such that said computer is useable to compare data representative of actual inflation characteristics against said baseline data.

39. The automatic medical balloon inflation device of claim 38 further comprising a bar code reader useable to upload said baseline data into said computer.